

**IN THE SPECIFICATION:**

Please cancel paragraphs 002, 046, 047, 048, 049, 050, 051, 052, 053, 054, 055, 056, 057, 058, 059, 060, 061, 079 and 080 of the Substitute Specification filed with the application. Please replace these cancelled paragraphs with replacement paragraphs, also 002, 046, 047, 048, 049, 050, 051, 052, 053, 054, 055, 056, 057, 058, 059, 060, 061, 079 and 080 as follows:

[002]           The present invention is directed to ~~directed to~~ a roller of an inking or a dampening system. The roller is axially movable by use of a traversing gear and has an individual drive motor for rotational motion of the roller.

[0046]           In addition to an ink feeding device, such as, for example, an ink fountain 311 with an actuating device 312, for use regulating the ink flow, the inking system 305 has a plurality of rollers 313 to 325. The ink feeding device can also be configured as a doctor blade crosspiece. With the rollers 313 to 325 placed against each other, the ink moves from the ink fountain 311 via the duct roller 313, the film roller 314, and a first inking roller 315, to a first distribution roller 316. Depending on the mode of operation of the inking system 305, as will be discussed below, from there, the ink moves via at least one additional inking roller 317 to 320 to at least one further distribution roller ~~cylinder~~ 321, 324, and from there, via at least one application roller 322, 323, 325, to the surface of the forme cylinder 304. In an advantageous embodiment, the ink moves from the first distribution cylinder 316 over several possible paths selectively or

simultaneously, either in series or in parallel, via two further distribution cylinders 321, 324 to the application rollers 322, 323, 325.

[0047] As shown in dashed lines in Fig. 3 for the second inking roller 317, that second inking roller 317 can be brought into a first position, shown in solid lines, in which it takes the ink from the first distribution roller 316 and conducts it via the second distribution roller 324, and at least the second application roller 325, to the forme cylinder 304. In principle, this path is independent of the to be described paths of the ink from the first distribution roller 316, or from the second distribution roller 324, via the third inking roller 318 and a third distribution roller 321, to the forme cylinder 304. In a second position of the second inking roller 317, which is shown in dashed lines, the second inking roller 317 has been moved away from the downstream located second distribution cylinder 324, and the path of the ink over the second distribution roller 324 is interrupted. In an advantageous embodiment of the inking and dampening systems 305, 306, the second distribution roller cylinder 324 can simultaneously work together with a roller 328, such as, for example, a fourth an application roller 328, of the dampening system 306. Fluid, such as ink and/or dampening agent on the second distribution roller cylinder 324, then can, with the rollers 324, 325, 326, as well as the cylinder 304 appropriately being brought into contact with each other, be simultaneously delivered via the application rollers 325 and 328 to the forme cylinder 304.

[0048] The third inking roller 318 can also advantageously be brought into two

positions. In a first position, shown in solid line, the third inking roller 318 takes the ink off the second distribution roller cylinder 324, which receives the ink from the first distribution roller cylinder 316 via the second inking roller 317, which is in its first position. The ink is conducted from the third inking roller 318, possibly via further inking rollers 319, 320, to a third distribution roller cylinder 321, and from there via at least one distribution roller 322, 323 to the forme cylinder 304. In a second position, which is shown in dashed lines, of the third inking roller 318, the ink is taken directly from the first distribution roller cylinder 316. This second position of the third inking roller 318 is of importance in particular when the second inking roller 317 is in its second, dashed lines, position.

[0049] If needed, it is possible, by use of the movable second inking roller 317, to interrupt a first ink path via two distribution rollers cylinders 316, 324 between the first and the second distribution rollers cylinders 316, 324.

[0050] It is therefore possible, by the use of the movable third inking application roller 318, to realize a direct ink path via two distribution rollers cylinders 316, 321 which are arranged in series, or via three distribution rollers cylinders 316, 321, 324 which are arranged in series, the first regardless of whether or not the above mentioned first ink path via the second distribution roller cylinder 324 has been realized in addition to, and parallel with this path.

[0051] The forme cylinder 304 is supplied with ink via a first, front application path from the second distribution ~~roller cylinder~~ 324 via one, or possibly via two application rollers 325, 328, and via a second application path, located in the rear, from the ~~second third~~ distribution ~~roller cylinder~~ 324 via one or several assigned application rollers 322, 323. The expression "front" and "located in the rear" application path refers to the sequence of the contact when the forme cylinder 304 rotates after conveying ink to the transfer cylinder 303.

[0052] As represented by dashed lines in Fig. 3, the movable third inking application roller 318 can be brought into a first position or placement, shown in dashed lines, in which it takes ink from the first distribution ~~roller cylinder~~ 316 and conveys it via the ~~fourth ink roller~~ application rollers 319, and the fifth ink roller 320 to the ~~third second~~ distribution ~~roller cylinder~~ 321. In a second position or placement, the third ink application roller 318 takes the ink from the second a third distribution ~~roller cylinder~~ 324, which receives the ink from the first distribution ~~roller cylinder~~ 316, via the second inking application roller 317. By use of the movable third inking application roller 318, it is therefore possible to realize a direct path of ink via two or three distribution cylinders 316, 321, 324 arranged in series, regardless of whether or not, in addition and in parallel to this path, a second path of the ink via only two distribution ~~rollers cylinders~~ 316, 324 has been realized.

[0053] The inking behavior of the forme cylinder 304 can be changed and set by

the inking system 305 via the movable third inking application roller 318. In the first mode of operation, in which the roller 318 is in the first position, as shown in dashed lines in Fig. 3, more ink is transferred into the application path "located in the rear" via the second group of rollers 319, 320, 321, 322, consisting of the third distribution roller cylinder 321 and assigned ink and application rollers 319, 320, 322, 323, and from there to the forme cylinder 304, than in the second operating mode in which the roller 318 is in its second position. In the second operating mode, ink for the rear application path is first taken from the second distribution roller cylinder 324. Correspondingly, in the reverse way, the ink application is reduced or is increased via the first group of rollers 324, 325, and possibly 328, from the direction of the second distribution roller cylinder 324 to the forme cylinder 304.

[0054]        The rollers or the distribution cylinders which are assigned to the inking system 305 or to the dampening system 306 are understood to be those rollers or distribution cylinders, which, with the inking and dampening systems operated separately, are assigned with their basic function, i.e. in this example a distribution roller cylinder 329 in the dampening system 306, and three distribution rollers cylinders 316, 321, 324, in the inking system 305 when dampening agent application and ink application are separated.

[0055]        As also indicated by dashed lines in Fig. 3, the fourth ink application roller 328 preferably can also be shifted between two operating positions. In a first position,

which is shown in a solid line, roller 328 is placed against the second distribution roller cylinder 324, and in a second position, which is shown in dashed lines, it is moved away from second distribution roller cylinder 324. In this case, the contact can be provided from the fourth ink application roller 328 of the dampening system 306 to the second distribution roller cylinder 324 of the inking system 305, where an ink/dampening agent emulsion is formed. However, in both positions the fourth ink application roller 328 works together with forme cylinder 304, and with a further distribution roller 329 of the dampening system 306, for example a distribution roller 329, in particular a traversing chromium roller 329. The traversing chromium roller 329 receives the dampening agent from a moistening arrangement, such as, for example, a roller 330, and in particular a dipping roller 330, which dips into a dampening agent supply 332, such as, for example, a water fountain. A drip pan 335 is preferably arranged underneath the water fountain for catching condensation water forming on the water fountain which, in an advantageous embodiment, is configured to be heatable, for example by the use of a heating spiral.

[0056] The mobility of the rollers 317, 318, 328 is to be understood as not to be the customary setting capability for adjustment purposes, but instead is meant to be the operational mobility for resetting from one operating position into the other. This means that actuating members and/or stops, such as, for example, adjustable ones, which can be operated manually or by drive mechanisms, are provided for the one, as well as for the other operating position. Furthermore, there is a longer permissible actuating path,

or the roller arrangement has been correspondingly selected in such a way that the two positions can be reached over the customary actuating path.

[0057] In an advantageous embodiment, the chromium roller 329 and the dipping roller 330 are each seated, for example on levers, so that they can be moved in a direction perpendicular to their respective axes, so that the position of the fourth application roller 328 can be changed in the above mentioned way.

[0058] The distribution rollers cylinders 316, 321, 324 of the inking system 305, as well as the distribution roller 329 of the dampening system 306 are seated, axially movable, in lateral frames, which are not represented in Fig. 3, in such a way that they can perform a traversing movement. The traversing movement of the distribution rollers cylinders 316, 321, 324 and of the distribution roller 329 takes place in a forced manner, coupled via appropriate gears with the respective rotatory drive mechanism. A seating which permits traversing is also provided for the fourth application roller 328 and for the third application roller 323. However, in contrast to the first mentioned distribution rollers cylinders 316, 321, 324 and the dampening system distribution roller 329, the axial movement of the application rollers 328 and 323 is merely caused by mechanical friction of the shell faces working together, and not by the use of an appropriate traversing gear. Such seating, which makes possible degrees of freedom in the axial direction, can also be provided optionally for the two application rollers 322 and 325.

[0059] The arrangement in the inking and dampening systems 305, 306, shown in solid lines in Fig. 3, represents the working together of the rollers 313 to 325 and 328 to 330 provided for during "normal" printing operations. Ink and dampening paths are also connected by the second distribution roller cylinder 324, besides via the former cylinder 304. Indirect dampening also takes place, in addition to direct dampening.

[0060] A mode of operations is schematically represented in Fig. 4, for only the upper printing group 301, wherein the second inking application roller 317, moved away from the second distribution roller cylinder 324, as shown in dashed lines, remains placed against the first distribution roller cylinder 316, which is shown in solid lines, and, in a further development, is simultaneously placed against the film roller 314. At the same time, the movable third inking application roller 318 is moved away from the second distribution roller cylinder 324 and is placed against the first distribution roller cylinder 316. Thus, the ink path runs via the first and third distribution rollers cylinders 316, 321. The fourth application roller 328 of the dampening system 306 is in contact with the third distribution roller cylinder 324, so that the application of dampening agent takes place directly and via five rollers 324, 325 and 328 to 330, thereby forming a five roller dampening system. Because of the displacement capability of the second inking roller 317, and possibly also of the third inking roller 318, one of three distribution rollers cylinders 316, 321, 324 of the inking system 305, and an application roller 325 can therefore be assigned to the dampening system 306. This mode of operation of the



inking and dampening systems 305, 306 is particularly suited when operating with special inks, and in particular with inks with a large metallic proportion, and/or if no indirect dampening is to take place for other reasons, such as, for example, emulsification behavior and/or unnecessary roller soiling.

[0061] Fig. 5 schematically shows, again only for the upper printing group 301, a mode of operation in which the fourth application roller 328 has been moved away from the second distribution roller cylinder 324, as shown in solid lines, but remains placed against the dampening system distribution roller 329, as well as the forme cylinder 304. Dampening takes place only via the three rollers 328 to 330. In a variation, which is not specifically represented, inking can take place simultaneously via all rollers 322, 323, 325 of the inking system 305, with the application rollers 322, 323, 325 in contact. In the variation shown in Fig. 5, however, the application rollers 322, 323, 325 are simultaneously moved away from the forme cylinder 304, as indicated by arrows, and the drive mechanism of the inking system 305 is, for example, decoupled or is stopped. This last mentioned variation of the present invention is particularly suited for the mode of operation of the inking and dampening system 305, 306 in connection with a so-called blind plate operation, which is when the assigned forme cylinder 304, or its printing forme, does not contain an image to be imprinted. Thus, because of the capability of the fourth application roller 328 to be displaced, a selection between direct dampening in the "three roller dampening system" and, as a function of the position of the second inking roller 317, indirect dampening, or direct dampening in the "five roller

dampening system" is possible.

[0079] In a preferred embodiment of the present invention, the pivot shaft S329 coincides with the axis of rotation of the roller 330 and is moved, along with the roller 329, 330 in the course of pivoting of the lever 364. The pivot shaft S330 of the roller 330 is fixed in place on the frame. One individual rotatory drive mechanism 367, 368 for each roller 329, 330, and in particular a drive motor 367, 368, is provided for each roller 329, 330, as seen in Fig. 12 2 and is also connected with the respective lever 364, 366 and is thus moved, along with the respective roller 329, 330, and which thus individually rotatorily drives the respective roller 329, 330, mechanically independently of each other, for example via a corner, bevel or angle gear 369, 371 . Drive motor 367, 368 is preferably embodied as an electric motor 367, 368 whose number of revolutions can be regulated, which can, in particular, be regulated continuously, and in particular as a rotary current motor 367, 368. Setting of the number of revolutions, or of the dampening, can take place in an advantageous manner from the control console, such as, for example from the ink setting console, where it is also displaced. In a preferred embodiment, a correlation between the speed of rotation of the press and the dampening, or the number of revolutions, is stored in the press control device, by the use of which, the number of revolutions, to which the two rollers 329, 330 are to be adjusted, and in particular to which the roller 330 is to be adjusted, can be preset.

[0080] The lever 366 of the roller 330 can have an adjustable stop 365, by the

use of which, the roller 330 is supported in the contact position of the dampening system 306 on a stop 370 of the fourth application roller 328, which works together with the roller 329.